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Claims

- 5 1. Device containing at least two compartments, one of them at least partially defined to the exterior by a first set of barriers permeable for a set of species, the other compartment(s) separated from said one
10 compartment by a second set of barriers permeable only for a subset of said species, only a subset of species that permeates into said one compartment permeates further on into said other compartment(s).
- 15 2. Device in accordance with claim 1, characterized in that said first set of barriers is permeable for species up to and including the size of a specific molecule, and said second set of barriers is permeable for species below the size of said specific molecule.
- 20 3. Device in accordance with claim 1 or 2, characterized in that at least one of the compartments is filled with a solution of known concentration of solutes, all solutes in said solution being unable to permeate through the barriers defining said compartment.
- 25 4. Device in accordance with claim 2, characterized in that the specific molecule is glucose.
- 30 5. Device in accordance with claim 3, characterized in that one of the solutes in said solution is glucose.
- 35 6. Device in accordance with claim 1, characterized in that the device is implantable and has an outer surface, which is predominately biocompatible.

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7. Device in accordance with claim 1, characterized in that the device further contains pressure-sensing means capable of sensing the pressures in said compartments.

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8. Device in accordance with claim 7, characterized in that the pressure sensing means comprises a pressure sensor for sensing the pressure exterior to said compartments.

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9. Device in accordance with claim 7, characterized in that the pressure sensing means contains a differential pressure sensor.

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10. Device in accordance with claim 7, characterized in that the pressure sensing means is at least partly formed as a deflection measurement of a flexible compartment, which will increase or decrease in volume when the pressure in the compartment increases or decreases.

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